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FIELD AND CROP LABOR ON GEORGIA FARMS
(COASTAL PLAIN AREA)

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INTRODUCTION

This bulletin is based upon data obtained from nearly 600 farmers in the coastal plain area of Georgia who were interviewed personally.[1] From each of these farmers a complete record was obtained covering the acreages and yields of the crops which he grew, the average time used by men and mules in different-sized crews, with different implements, width of rows, and number of furrows for various field and crop operations, the hours per day and the days per month available for field work, and the dates of performing different operations on cotton, corn, peanuts, sweet potatoes, sugar cane, cowpeas, watermelons, oats, wheat, and rye. No data are presented for bright tobacco as this crop is grown only on a very small acreage on these farms. Because of its soil requirements, tobacco is almost entirely restricted to certain sections of the coastal plain not covered by this investigation.

Information was collected in three different sections of the area. (Fig. 1.) The differences between the three sections are so slight that the data were combined and are presented as being representative of the entire area.

Although studies were made only in the one State, the data should be applicable to those parts of Mississippi, Alabama, Florida, North

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[1] These data were collected under the direction of E. S. Haskell, formerly asisstant agriculturist in the Department of Agriculture, in connection with a study of farm management and farm organization in Georgia. (See United States Department of Agriculture Bulletin 648, A Farm Management Survey in Brooks County, Ga., and Farmers' Bulletin 985, A System of Hog Farming in the Southeastern States.)

Carolina, and South Carolina which lie within the coastal plain where soil, climate, types of farming, and farm practices are similar.

With these data at hand, a farmer can measure the efficiency of the labor on his farm by comparing the performance of his crew at different operations with the accomplishment of crews at the same operations on other farms. With the purchase of a new machine of a size and type that has not been used on the farm, the information given here will enable the farmer to determine closely what the accomplishment of his men and mules with the new machine should be. There are wide variations from farm to farm in the size of crew used for such operations as plowing and harrowing. The information on

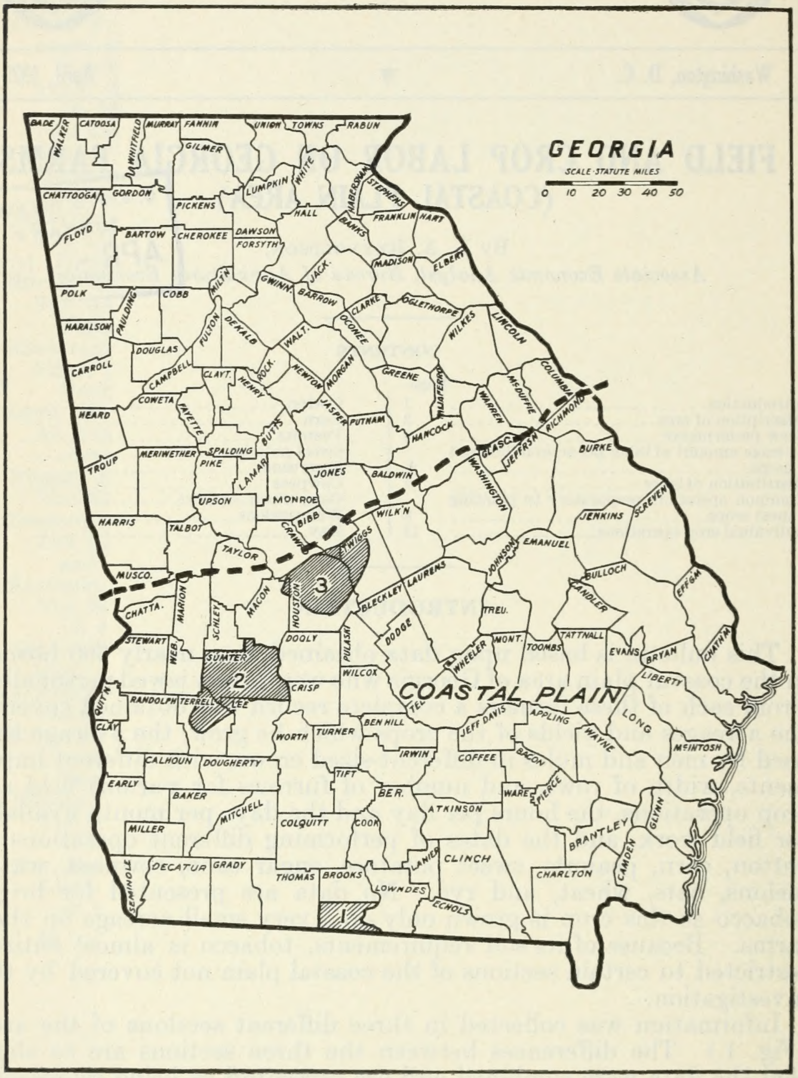

FIG. 1.—Shaded areas indicate where data were obtained

the amount done per day by different-sized crews on different operations will enable a farmer to determine whether he has organized his labor in the best way for his farm.

Of course it is not possible, with the time at his command, for a farmer to grow each and every crop here discussed, because various crops compete with one another on different operations. It is necessary for every farmer to plan his crops and acreage so that his man and mule labor and machinery equipment will be able to handle all of the necessary work at the busiest season of the year. The ideal arrangement is to have the crops and acreages so balanced that the labor will be evenly distributed and there will be only minor labor competition throughout the year.

When a change in the cropping system is contemplated, such as a readjustment of the acreages devoted to the different crops, the introduction of a new crop, or a change in the acreage of the farm, the data in this bulletin will help determine in advance the maximum acreage of any crop or any combination of crops that can be handled by a given number of men and mules. A farmer can find what will be the busy times, if he adopts a changed cropping system, and how much extra labor, if any, will have to be hired to help out the regular force at such times.

When planning the program of work for a particular farm, a farmer must take into consideration variations which may occur in the weather from year to year and the peculiarities of the farm, such as the size and shape of fields, type of soil, topography, prevalence of stumps and stones, length of rows, and quality of labor, work stock and equipment that will affect the time required for different kinds of work.

DESCRIPTION OF AREA

Section No. 1 is located on the Georgia-Florida State line, about 50 miles north of the Gulf of Mexico. The soil of this section is sandy, underlain by a subsoil of heavier texture; the topography is gently rolling to flat, with good natural drainage. The summers are long and warm and the winters mild. Snow is very rare. The average annual precipitation is about 52 inches. The principal crops, in size of acreage, are cotton, corn, and oats. According to the United States census for 1910 and 1920, the comparative standing of these crops has remained unchanged, although during this period the acreage in cotton has decreased and that in corn has increased.

The northern boundary of section No. 2 is located about 28 miles south of the line separating the coastal plain and Piedmont Plateau. The soils of this section are sandy, but heavier than those of section No. 1, because of material washed down from the Piedmont Plateau. Soft limestone underlies the top soil of the entire section. The topography is very rolling to flat, with good drainage. The climate is similar to that of section No. 1 and the average annual precipitation is about 48 inches. Census figures for 1910 show cotton, corn, and oats as the most important crops. The figures for 1920 show a marked reduction in the cotton acreage, an increase in corn acreage, and oats supplemented by peanuts.

Section No. 3 is located on the northern border of the coastal plain. Except for a slightly heavier soil, because of the proximity of the Piedmont Plateau and a more rolling topography, the soil, topography, climate, and rainfall are all similar to those of section No. 2. The principal crops in 1910, according to census figures, were cotton, corn, and oats. In 1920, a decrease in both the cotton and corn acreage was shown, and cowpeas were grown on a larger acreage than were oats.

CREW PERFORMANCE

The number of men and mules used to handle a single implement, or piece of equipment, or the number of men used for an operation performed by hand, is termed a crew. For example, one man and, one mule at plowing or breaking would be a crew, and if in siding two outfits were at work, each would be a crew. Crew performance is the amount of work which a crew does in a given time—in 10 hours for example. The performance of crews of the same size will necessarily vary, often to a marked degree, on different farms in the same area. Some factors, affecting crew performance are type of soil, topography, weather, size and shape of fields, length of rows, terraces, stumps and stones, size of implement, size of mules, and type of labor.

AVERAGE AMOUNT OF LABOR PER ACRE ON DIFFERENT CROPS

A summary of the average number of hours of man and mule labor used per acre on the different crops for which information was obtained is given in Table 1. Every operation from preparing the land to the final disposition of the crop is included in these figures. From this table, a comparison of the total hours reported for different crops or different combinations of crop can be made. The number of reports corresponds in every case to the number of men interviewed who grew the crop during the year covered by the investigation. The hours per acre represent the average time spent by the men who grew the crop, irrespective of the number and character of operations performed.

TABLE 1.—*Average man and mule labor per acre used for different crops*

Crop	Hours per acre		Number of reports	Crop	Hours per acre		Number of reports
	Man	Mule			Man	Mule	
Cotton	132.5	59.6	249	Sweet potatoes	131.0	66.4	59
Corn	36.3	32.6	250	Sugarcane (plant)	282.9	182.3	32
Corn, velvet beans, and peanuts	37.1	33.7	89	Sugarcane (stubble)	216.4	130.3	10
				Cowpeas	20.3	23.8	106
Corn and peas	37.7	33.9	124	Oats, wheat, and rye	18.4	23.0	202
Peanuts (alone) [1]	29.4	22.8	79	Watermelons	55.3	52.4	60

[1] Hogged off.

There are certain crop operations, make-up and size of crew, implements, width of rows, and number of furrows that are common in different areas. When only the principal operations are considered, the hours per acre for man and mule labor are lower. Table 2 shows the principal operations for cotton, corn, peanuts, sweet potatoes, sugarcane, cowpeas, watermelons, and oats, wheat, and rye.

TABLE 2.—*Principal operations for various crops*

Crop and operation	Implement or method	Crew		Average acreage per day[1]	Times over	Average hours per acre	
		Men	Mules			Man	Mule
COTTON (4-foot rows)							
Cut stalks	1-row stalk cutter	1	2	8.65		0.9	1.8
Plow	Turnplow	1	2	2.01		4.0	8.0
Harrow	2-section harrow	1	2	12.73	2	1.3	2.6
Lay off rows (1 furrow)	Shovel or scooter	1	1	7.50	1	1.2	1.2
Bed (2 furrows)	Turn plow	1	1	3.58	1	2.5	2.5
Fertilize	Distributor	1	1	7.14	1	1.5	1.5
Plant	Planter	1	1	7.37	5	13.3	13.3
Side (2 furrows)	Scooter or scrape	1	1	4.00	1	1.4	1.4
Chop	Hoe	1		1.21	1	8.7	
Hoe	do	1		1.68	2	12.5	
Cultivate middles (1 furrow)	Shovel cultivator	1	1	8.54	3	3.4	3.4
Pick	By hand	1		[2] 151		66.2	
Haul to gin	Wagon	1	1	[3] 2		3.5	7.0
Haul to market	do	1	2	[3] 6		1.4	2.8
PEANUTS (3-foot rows)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Lay off rows (1 furrow)	Shovel or scooter	1	1	5.76	1	1.7	1.7
Drop	By hand	1		2.56	1	3.9	
Cover (1 furrow)	Turnplow	1	1	5.73	1	1.7	1.7
Side (2 furrows)	Shovel or scraper	1	1	3.40	2	6.2	6.2
Hoe	Hoe	1		1.50	1	7.0	
Cultivate middles (1 furrow)	Shovel cultivator	1	1	6.17	2	3.4	3.4
SWEET POTATOES (3½-foot rows)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Harrow	2-section harrow	1	2	12.73	2	1.3	2.6
Lay off rows (1 furrow)	Shovel or scooter	1	1	6.53	1	1.5	1.5
Bed (2 furrows)	Turnplow	1	1	3.50	1	2.9	2.9
Fertilize	Distributor	1	1	5.31	1	1.8	1.8
Plant	By hand	1		.60	1	17.5	
Hoe	Hoe	1		1.31	2	16.8	
Side (2 furrows)	Scooter or scrape	1	1	3.61	2	6.1	6.1
Turn vines	By hand	1		1.98	2	11.0	
Cultivate middles (1 furrow)	Shovel cultivator	1	1	6.89	2	3.2	3.2
Harvest		3	2	.99		28.8	19.6
OATS, WHEAT, RYE (broadcast)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Plant	Drill	1	2	8.89	1	1.0	2.0
Cut	Binder	1	3	9.80	1	1.1	3.3
Shock	By hand	1		10.81	1	1.0	
Haul to barn	Wagon	2	2	10.41	1	2.1	2.1
Thresh	Separator	8	4	15.00	1	5.8	2.9
CORN (5-foot rows)							
Cut stalks	1-row stalk cutter	1	2	9.10		.9	1.8
Plow	Turnplow	1	2	2.01		4.0	8.0
Harrow	2-section harrow	1	2	12.73	1	1.3	2.6
Lay off rows (1 furrow)	Shovel or scooter	1	1	8.73	1	1.0	1.0
Fertilize	Distributor	1	1	7.88	2	2.4	2.4
Plant	Planter	1	1	9.26	1	1.0	1.0
Side (2 furrows)	Scooter or scrape	1	1	4.97	3	6.2	6.2
Cultivate middles (2 furrows)	Shovel cultivator	1	1	5.32	2	3.8	3.8
Pull fodder	By hand	1		1.20		9.2	
Pull and haul corn	Wagon	3	2	7.09		3.9	2.6
SUGARCANE (4-foot row)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Lay off rows (1 furrow)	Shovel or scooter	1	1	7.50	1	1.2	1.2
Bed (4 furrows)	Turnplow	1	2	2.41	1	3.7	7.4
Plant	Wagon	1	2	1.04	1	.9	1.8
Cover (2 furrows)	Turnplow	1	1	4.18	1	2.1	2.1
Hoe	Hoe	1		.91	1	11.1	
Side (2 furrows)	Scooter or scraper	1	1	4.07	4	10.4	10.4

[1] The average acreage per day in each case is taken from the detailed tables of operations preparatory to planting or from the detailed tables of operations for the different crops. The average hours per acre is obtained by dividing the average number of work hours per day (figs. 4 and 5) by the acreage per day and multiplying the quotient by the number of times over and the number of men or mules in the crew.

[2] Pounds.

[3] Bales.

TABLE 2.—*Principal operations for various crops*—Continued

Crop and operation	Implement or method	Crew		Average acreage per day	Times over	Average hours per acre	
		Men	Mules			Man	Mule
SUGARCANE (4-foot row)—Con.							
Fertilize	Distributor	1	1	7.14	1	1.5	1.5
Cultivate middles (2 furrows)	Shovel cultivator	1	1	4.12	3	7.7	7.7
Cut and strip	By hand	1	1	.10	1	90.0	
Bed seed cane	do	1	1	.47		18.8	
Haul and grind		1	2	.09		103.6	114.6
COWPEAS (broadcast)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Sow	By hand	1		14.33	1	.7	
Cover	Turnplow	1	1	2.16	1	5.1	5.1
Harrow	2-section harrow	1	2	12.73	2	1.3	2.6
Cut	Mower	1	2	7.26	1	1.3	2.6
Rake	Dump rake	1	1	13.05	1	.7	.7
Haul and stack	Wagon	2	2	5.84	1	3.2	3.2
Bale	Baler	3	1	7.14	1	3.6	1.2
WATERMELONS (10-foot row)							
Plow	Turnplow	1	2	2.01		4.0	8.0
Lay off rows (1 furrow)	Shovel or scooter	1	1	17.25	1	.5	.5
Bed (2 furrows)	Turnplow	1	1	8.91	1	1.1	1.1
Open rows (1 furrow)	Middle burster	1	2	16.14	1	.6	1.2
Fertilize	By hand	1		9.16	2	2.2	
Checkrow (1 furrow)	Shovel or scooter	1	1	17.32	1	.6	.6
Plant and replant	By hand	1		9.27	2	2.1	
Side (2 furrows)	Shovel or scrape	1	1	9.09	4	4.7	4.7
Hoe and thin	Hoe	1		5.04	2	3.9	
Cultivate middles (2 furrows)	Shovel cultivator	1	1	8.53	5	6.2	6.2
Cut and pile	By hand	1		1.80	1	6.1	
Haul	Wagon	1	2	1.12	1	9.8	19.6

Figure 2 illustrates the wide variation in the number of hours per acre of man and mule labor which different numbers of men put on cotton. There is a wide range in the number of hours per acre both above and below the average given in Table 1. Similar differences occur for the other crops. These variations are due almost entirely to the different operations performed by different men, the number of times certain operations are performed—as for example, cultivating—and the method of harvesting the crop, as in the case of peanuts, the bulk of which are hogged off.

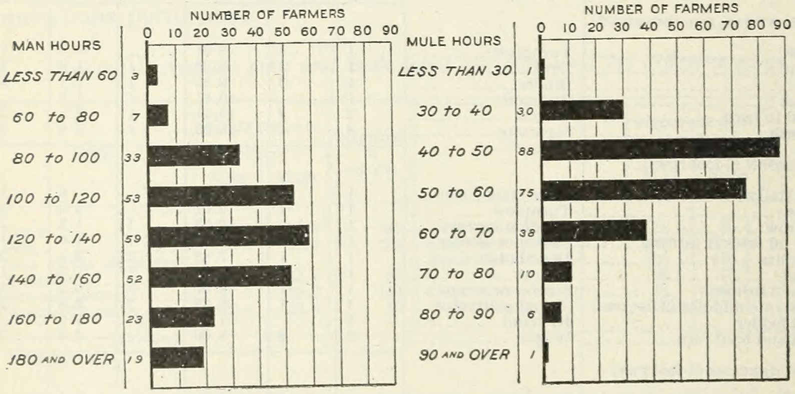

FIG. 2.—Variations in the number of man and mule hours per acre required by each of 249 farmers to raise an acre of cotton

DISTRIBUTION OF LABOR

The limits within which operations for different crops are performed by most farmers in the coastal plain area of Georgia are shown in Figure 3. The operations given for the different crops correspond to those given in Table 2. As the time at which some operations are performed is identical, they are combined, as, for example, siding and cultivating middles. The heavy lines show the limits of the time in which the majority of the men performed each operation given. There is considerable variation in the length of the time in which many operations can be performed; for example, the earliest plowing date reported for cotton was October 1 and the latest May 1, yet the time in which plowing for cotton is done by most farmers is confined within two and one-half months with a total of 36 available work days. With planting, the time is perhaps more restricted than for any other operation. At the top of Figure 3, the average number of days per month is given in which the men reported field work could be done, and im-

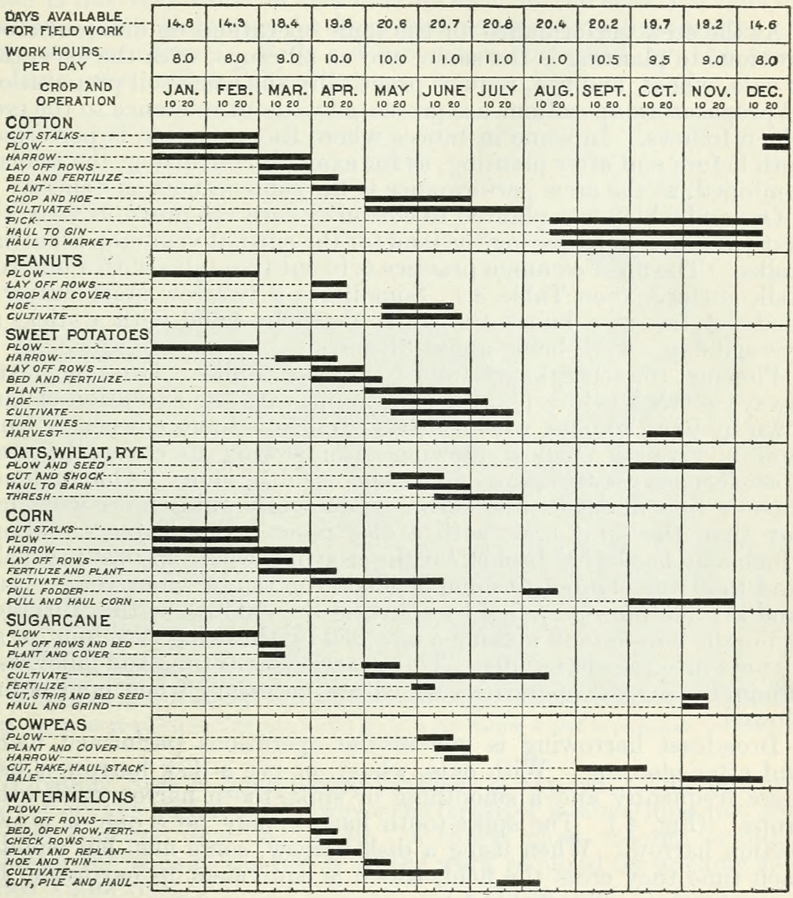

FIG. 3.—The time of year during which the principal operations on different crops are performed by the majority of farmers, together with the work days per month and hours per day available for field work

mediately below is given the average length of workday in the different months.

If the crops now grown on a farm are combinations of those given in Figure 3 and the operator wishes to grow another of the crops given, reference to the figure will show any serious labor conflict which might occur because of the introduction of the new crop into the present organization scheme.

COMMON OPERATIONS PREPARATORY TO PLANTING MOST CROPS

As the crew performance for the same operations on different crops previous to planting is the same, and as all crops, with the exception of oats, wheat, and rye, require practically the same soil preparation, all preparatory operations are presented without reference to the crop which follows. In some instances where the operation is performed both before and after planting, as for example, fertilizing, the two are combined, as the crew performance is the same in both instances.

On land which was planted to cotton or corn the previous year, the first operation in preparing the land for the current year crop is cutting stalks. The most common practice is to cut the stalks with a one-row stalk cutter. (See Table 3.) Sometimes a two-row stalk cutter is used. A few men knock the stalks down by hand with a stick, an average day's work being about 3½ acres.

Plowing (flat breaking) follows cutting stalks. Land is nearly always plowed before planting any crop, with the exception of land sown by hand to oats, wheat, or rye, and sometimes cowpeas. Such land is given a shallow plowing after sowing to cover the seed. Most farmers use turnplows, but some use disk plows. One man and three or four mules with a turnplow do considerably more work in a day than the same crew with a disk plow. (See Table 4.) Land which may not be flat broken for the crop of the current year is usually land that was planted to some bedded crop the previous year. Such land is sometimes prepared by splitting the old rows with a turnplow or middle burster and making a new bed by throwing two, four, or six furrows into the old middle. This practice saves time and labor, as it eliminates several operations which are necessary when land is first plowed.

Broadcast harrowing is one of the operations performed before and after planting. With oats, wheat, or rye a disk harrow is used more frequently and a smoothing or spike-tooth harrow with other crops. (Fig. 4.) The spike-tooth harrow may be a one or a two-section harrow. When using a disk harrow, some men lap one-half each time they cross the field, which is equivalent to harrowing the ground twice. (See Table 5.)

Laying off rows for planting is done with different implements. The most common is a shovel plow or scooter, but a middle burster or a home-made two-row marker is sometimes used. Checking rows is done only for watermelons. The rows for this crop are usually 10 feet apart each way, and as the seed is planted by hand checkrowing is helpful. (See Table 6.)

In preparing land for planting row crops, it is ridged up or bedded. This operation is performed by throwing 2, 4, and sometimes 6 furrows together with a turnplow. In some localities bedding is done with a middle burster or a disk cultivator. Sometimes rebedding is done. The number who rebed is small and the rate of work is the same as for bedding. Rebedding is done to cover fertilizer, to stir the soil still further, or throw up a larger bed. (See Table 7.) A bed is sometimes made by throwing two or more furrows together with a turnplow and then using a middle burster or scooter to break the middles. As the middle burster goes only once to the row, it does a more thorough job. (See Table 8.)

On some farms with heavy soil it is a common practice to harrow beds, to break up the lumps and make a finer seed bed. This operation is not very usual in this area as most of the soils are light and sandy. Two beds may be harrowed at one time by the use of a two-section harrow. Beds are sometimes smoothed by the use of a hand rake. (See Table 9.)

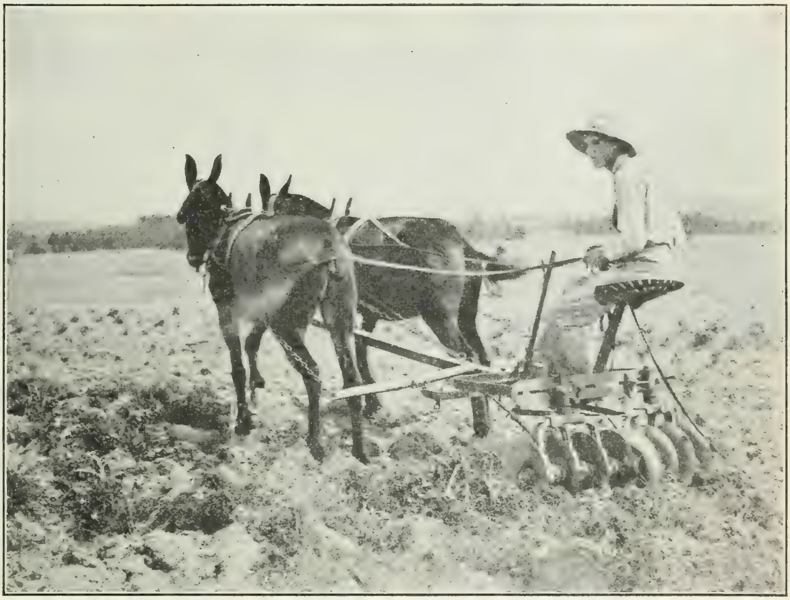

FIG. 4.—When preparing land for oats, wheat, or rye, a disk harrow is used in preference to a spike-tooth harrow

Opening rows is done before fertilizer is applied. This operation is not always performed, however, as fertilizer is sometimes put down in the row and then bedded on. A shovel plow, scooter, or middle burster run once to the row is all the work required for opening rows. (See Table 10.)

Barnyard manure is hauled to the field, is usually thrown in piles, and is later spread by hand. The crew performances at this operation depend upon the length of haul from barn or lot to the field. Table 11 gives the tons hauled per day by different crews irrespective of distance.

Commercial fertilizer is applied at different times either by hand with or without a horn, or with a distributor. (Fig. 5.) When applied (Table 12) before planting, it is bedded on or put in an open row in the bed. When applied after planting a side application is made. Fertilizer applied in open rows on the bed is covered before planting by throwing one or two furrows over it with a shovel cultivator. (See Table 13.)

A few men in this area subsoil. The practice is not very common because of the character of the soil, but enough reports were obtained to show the performance of crews with different implements. The purpose of this operation is to loosen the soil in the row to a greater depth than is possible with a turnplow, or to mix the fertilizer which has been put down in the row. (See Table 14.)

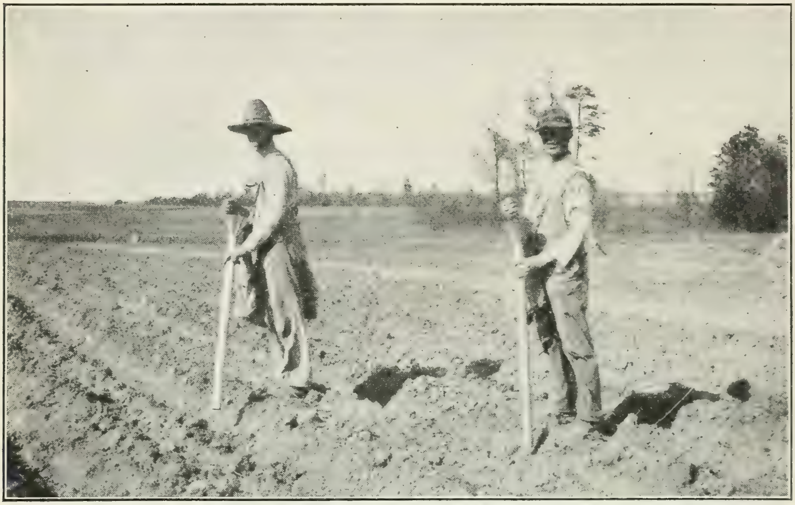

FIG. 5.—Using a horn to distribute fertilizer by hand before planting

TABLE 3.—*Cutting cotton or cornstalks*

(1-row stalk cutter—1 man, 2 mules)

Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
3	28	7.64	6 (6 reports). 8 (6 reports).
3½	106	7.77	7 (21 reports). 8 (30 reports).
4	128	8.65	8 (40 reports). 10 (30 reports).
4½	65	8.85	8 (33 reports). 10 (16 reports).
5	47	9.10	10 (20 reports).
5½	19	11.10	10 (11 reports).
6	43	13.15	12 (14 reports). 15 (13 reports).

TABLE 4.—*Plowing* (*flat breaking*)

Implement	Man	Mules	Number of reports	Average acreage per day	Acreage reported most frequently
Turnplow	1	1	84	1.49	1 (25 reports). 2 (23 reports).
Do	1	2	654	2.01	2 (341 reports).
Do	1	3	32	3.34	3 (21 reports).
Do	1	4	40	5.02	5 (23 reports).
Disk plow	1	2	9	2.11	2 (6 reports).
Do	1	3	43	2.23	2 (19 reports).
Do	1	4	22	2.75	3 (11 reports).

TABLE 5.—*Broadcast harrowing*

(Once over before or after planting)

Implement	Crew		Number of reports	Average acreage per day	Acreage reported most frequently
	Man	Mules			
Disk harrow	1	2	103	7.52	6 (22 reports). 8 (20 reports).
Do	1	4	11	14.82	Scattering.
Spike-tooth harrow, 1-section	1	1	21	10.09	10 (10 reports).
Spike-tooth harrow, 2-section	1	2	348	12.73	15 (72 reports).
Spring-tooth harrow, 1-section	1	1	13	10.23	Scattering.

TABLE 6.—*Laying off and checking rows*

Operation, implement, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Lay-off rows, shovel or scooter (1-man, 1-mule)	3	63	5.76	6 (28 reports).
Do	3½	108	6.53	6 (33 reports). 7 (33 reports).
Do	4	86	7.50	8 (37 reports).
Do	4½	39	8.14	8 (16 reports).
Do	5	37	8.73	8 (10 reports). 10 (14 reports).
Do	6	35	10.56	Scattering.
Do	6½	29	11.19	12 (11 reports).
Do	7	20	11.95	Scattering.
Do	10	49	17.25	20 (19 reports).
2-row marker (1 man, 1 mule)	4	25	14.08	Scattering.
Do	5	11	14.45	Do.
Do	6	11	15.45	Do.
Middle burster (1 man, 2 mules)	3½	12	7.08	7 (4 reports).
Do	4	27	7.26	8 (9 reports).
Do	4½	17	7.32	8 (6 reports).
Do	5	13	8.46	Scattering.
Checkrows, shovel or scooter (1 man, 1 mule)	10	49	17.32	20 (19 reports).

TABLE 7.—*Bedding*

Implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Turnplow (2 furrows—1 man, 1 mule)	3	24	3.07	3 (10 reports).
Do	3½	71	3.60	3 (21 reports). 4 (18 reports).
Do	4	61	3.68	4 (26 reports).
Do	5	12	4.58	5 (5 reports).
Turnplow (2 furrows—1 man, 2 mules)	3½	24	3.89	3 (9 reports). 4 (5 reports).
Do	4	11	4.36	4 (7 reports).
Do	5	12	5.04	Scattering.
Turnplow (4 furrows—1 man, 1 mule)	3½	25	1.86	1½ (7 reports). 2 (8 reports).
Do	4	22	2.41	2 (7 reports).
Do	5	14	2.50	3 (5 reports).
Turnplow (4 furrows—1 man, 2 mules)	4½	17	2.84	Scattering.
Disk cultivator (1 man, 2 mules)	4	10	7.20	8 (6 reports).

TABLE 8.—*Breaking middles*

(1 furrow)

Implement and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Middle burster (1 man, 2 mules)	5	12	7.58	8 (4 reports).
Scooter or shovel (1 man, 1 mule)	5	10	8.20	8 (4 reports). 10 (4 reports).

TABLE 9.—*Harrowing beds*

Implement and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
1-section spike or spring-tooth harrow (1 man, 1 mule)	3½	13	6.62	7 (5 reports).
Do	4	14	7.43	6 (5 reports). 8 (5 reports).
2-section spike-tooth harrow (1 man, 2 mules)	4	24	14.29	15 (7 reports).

TABLE 10.—*Opening rows*

Implement and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Shovel or scooter (1 man, 1 mule)	3	23	6.11	6 (9 reports).
Do	3½	55	6.52	6 (18 reports). 7 (17 reports).
Do	4	41	7.33	6 (10 reports). 8 (12 reports).
Do	4½	14	8.14	Scattering.
Do	5	18	8.89	Do.
Do	6	28	10.50	10 (9 reports). 12 (10 reports).
Do	6½	25	11.64	Scattering.
Do	7	24	12.62	Do.
Do	10	13	18.65	Do.
Middle burster (1 man, 2 mules)	4	10	7.75	8 (4 reports).
Do	5	14	9.43	10 (7 reports).
Do	10	14	16.14	Scattering.

TABLE 11.—*Hauling manure*

(Wagon)

Crew		Number of reports	Average tons per day	Tons reported most frequently
Men	Mules			
2	2	46	8.73	Scattering.
3	2	16	9.25	Do.

TABLE 12.—*Applying fertilizer*

(Before or after planting)

Method, implement, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
In rows (1 man with horn)	3	10	5. 20	Scattering.
Do	3½	29	5. 31	Do.
Do	4	24	5. 52	Do.
Do	4½	20	6. 85	Do.
Do	5	23	7. 00	Do.
Do	6	14	8. 86	Do.
Do	10	34	9. 16	10 (12 reports).
Broadcast (1 man by hand)		81	10. 57	10 (28 reports).
Distributor (1 man, 1 mule)	3	39	5. 74	6 (15 reports).
Do	3½	115	6. 20	6 (27 reports). 7 (28 reports).
Do	4	144	7. 14	7 (22 reports). 8 (52 reports).
Do	4½	72	7. 35	8 (26 reports).
Do	5	82	7. 88	8 (19 reports).
Do	5½	13	10. 08	Scattering.
Do	6	58	10. 66	10 (17 reports).
Do	6½	21	11. 33	10 (5 reports). 14 (5 reports).
Do	7	11	13. 55	Scattering.

TABLE 13.—*Covering fertilizer*

(Shovel cultivator, 1 man, 1 mule)

Width of row	Number of furrows	Number of reports	Average acreage per day	Acreage reported most frequently
Feet				
4	1	15	5. 97	Scattering.
3½	2	19	3. 55	3 (7 reports). 4 (6 reports).
4½	2	11	4. 91	Scattering.
10	2	24	10. 12	Do.

TABLE 14.—*Subsoiling*

Implement and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Subsoil plow (1 man, 2 mules)	3½	21	5. 71	Scattering.
Scooter (1 man, 1 mule)	4	18	6. 92	Do.

INDIVIDUAL CROP OPERATIONS

The crew performance on planting and on many of the other operations varies for individual crops. For some operations, such as siding or cultivating middles, the crew performance may be somewhat similar for different crops, but the operations for each crop from planting to harvesting are here shown separately.

COTTON

The common method of planting cotton is with a single-row, one-mule planter. (See Fig. 6.) On small patches cotton may be planted by hand, and on large plantations a two-row riding planter may be used. Some of the machines are a combination planter and fertilizer distributor, which can also be used for planting such crops as corn, peas, and beans, as well as distributing fertilizer. (See Table 15.)

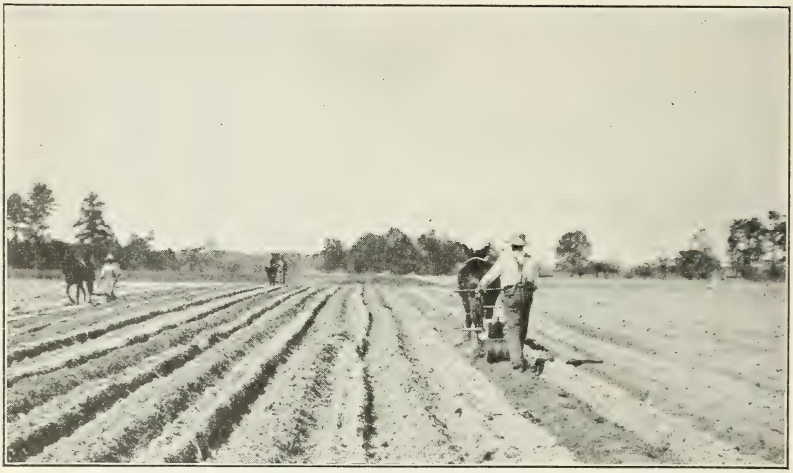

FIG. 6.—Man at right planting cotton on beds made by the two outfits at left

All operations having to do with killing weeds, stirring the soil after planting, and thinning cotton are classified as cultivating operations. (See Fig. 7.) The first of these operations is siding, which is performed with a scooter or scrape. The implement is run up and down each side of the row and throws the weeds and grass to the middle. This operation is performed several times during the season and the

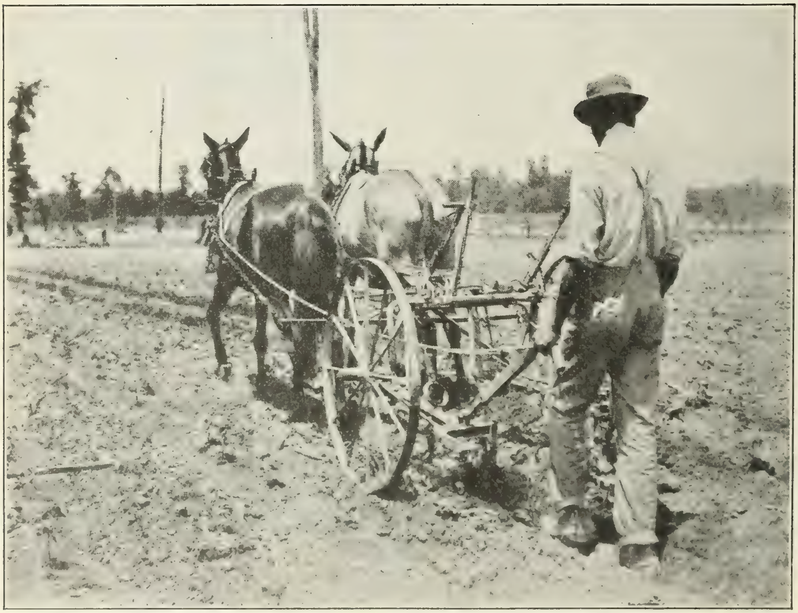

FIG. 7.—Cultivating cotton with a combination riding and walking 1-row cultivator. The use of such an implement requires but one trip to the row as compared with two with a scooter or scrape

width of the bed is reduced each time siding is done. In some localities the term scrape is used instead of siding. Barring off is done for the same purpose as siding, the only difference being that a turnplow is used in the place of a scooter or scrape.

Cotton is planted in a continuous row, and when the stand is well defined the plants are chopped out with a hoe to a stand of 12 to 18 inches. Any subsequent work with the hoe is termed hoeing. Depending on the season and the weed growth, hoeing is done one or two times.

Cultivating middles and breaking middles after planting are terms which signify the same operation. Middles are usually cultivated after each siding, so that this operation may be done the same number of times as siding. One furrow to the row is the common practice, but two and three are sometimes run down the middle. (See Table 16.) Weeders, A-harrows, and spring-tooth cultivators are frequently used to cultivate middles. Such implements are usually wide enough to do a complete job of cultivating in one trip.

Since the boll-weevil infestation it is the practice to pick and destroy the weevil-infested squares. The most successful method of direct control of the boll weevil is poisoning by the use of calcium arsenate. The rate of performimg these two operations is not given, as not enough reports are available to give reliable results.

The rate of picking cotton varies greatly. Some can pick as much as 300 pounds of seed cotton per day at the first picking. The rate per day, for the first time over, is always higher than for subsequent pickings, so that the best pickers always average less for the season than for the first time. Table 17 shows the average rate of picking per day for two different yields per acre. According to the estimates from which this table is made, the total yield per acre does not influence the number of pounds picked per day.

Each picker is equipped with a sack, into which the seed cotton is thrown. When the sack is full, the contents are dumped onto a sheet at the end of the row, and the total day's pick is weighed at night. The cotton is then stored in the cotton house for the night or put in a wagon and hauled to the gin. The gin may be located in town or at some convenient crossroads. If the former, the cotton is usually stored in a warehouse after ginning; and, if the latter, it is hauled back home and marketed later.

Ordinarily, a large part of the time required in hauling cotton to the gin is taken up in waiting one's turn to have his load ginned. (Fig. 8.) This may mean several hours, and in case of long hauls it will be possible to make only one trip a day. The only time taken to market cotton (Table 18) other than hauling is for sampling, selling, and weighing.

TABLE 15.—*Planting cotton*

(1-row planter—1 man, 1 mule)

Width of of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
3	19	6. 39	6 (11 reports).
3½	95	6. 67	6 (31 reports). 7 (23 reports).
4	104	7. 37	7 (20 reports). 8 (35 reports).
4½	18	8. 19	8 (8 reports).
5	13	9. 27	10 (9 reports).

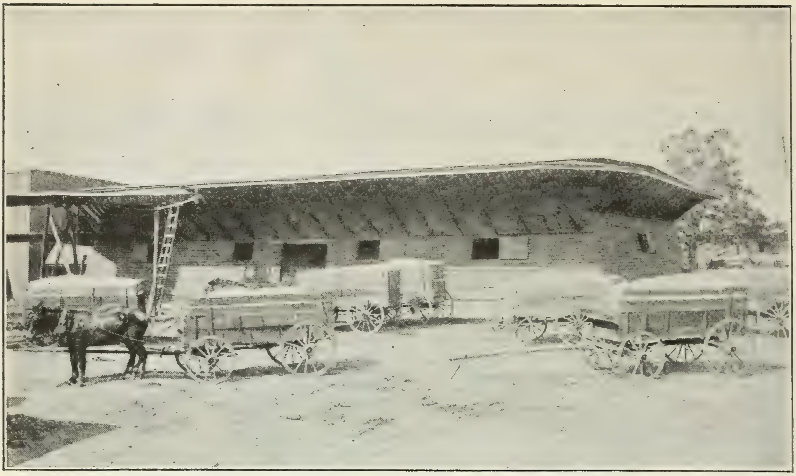

FIG. 8.—Waiting is the cause of much lost time when the cotton is ginned

TABLE 16.—*Cultivating cotton*

Operation, implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Chop (1 man)	3	19	1.07	1 (16 reports).
Do	3½	96	1.12	1 (57 reports).
Do	4	97	1.21	1 (54 reports).
Do	4½	18	1.32	1½ (19 reports). 1 (11 reports).
Do	5	13	1.38	Scattering.
Hoe first time (1 man)	3	15	1.35	1 (8 reports). 1 (32 reports).
Do	3½	88	1.47	2 (25 reports).
Do	4	74	1.69	1 (25 reports). 2 (17 reports).
Do	4½	17	1.85	Scattering.
Do	5	10	1.90	Do.
Hoe second time (1 man)	3½	18	1.62	1 (5 reports). 2 (5 reports).
Do	4	36	1.66	1 (15 reports). 2 (8 reports).
Do	4½	10	1.80	Scattering.
Side (scooter or scrape; 2 furrows, 1 man, 1 mule)	3	17	3.09	3 (14 reports).
Do	3½	87	3.52	3 (27 reports). 4 (29 reports).
Do	4	101	4.00	4 (45 reports).
Do	4½	15	4.37	4 (5 reports). 5 (6 reports).
Do	5	11	4.68	5 (7 reports).
Bar-off (turnplow, 2 furrows, 1 man, 1 mule)	3½	21	3.63	3½ (5 reports). 4 (5 reports).
Do	4	28	4.02	3 (8 reports). 4 (12 reports).
Cultivate middles (shovel cultivator, 1 furrow, 1 man, 1 mule)	3	15	6.40	6 (8 reports). 7 (23 reports).
Do	3½	81	7.42	8 (22 reports).
Do	4	104	8.54	8 (32 reports). 10 (23 reports).
Do	4½	16	9.47	10 (9 reports)
Do	5	13	10.04	10 (8 reports).

TABLE 17.—*Picking cotton*

(1 man)

Yield per acre (bales)	Number of reports	Average pounds seed cotton per day	Pounds reported most frequently
One-half and under	90	142.80	150 (34 reports).
Over one-half	159	143.78	150 (68 reports).

TABLE 18.—*Hauling and marketing cotton*

(1 man, 2 mules)

Operation	Length of haul	Number of reports	Average bales per day	Number of bales per day most frequently reported
	Miles			
Haul to gin	[1]	14	2.79	2 (8 reports). 4 (5 reports).
Do	1	20	2.75	2 (5 reports). 3 (6 reports).
Do	2	44	2.07	2 (35 reports).
Do	3	31	1.81	2 (19 reports).
Do	4	11	1.77	2 (8 reports).
Do	5	10	1.70	2 (7 reports).
Do	6	7	1.57	1 (3 reports). 2 (4 reports).
Haul to gin and market	1	9	2.78	2 (5 reports).
Do	2	10	2.20	2 (8 reports).
Do	3	10	2.20	Scattering.
Do	4	9	1.61	2 (5 reports).
Do	5	8	1.44	1 (4 reports).
Do	6	6	1.33	Scattering.
Do	7	8	1.38	1 (5 reports).
Do	9	8	1.00	1 (8 reports).
Do	10	7	1.00	1 (7 reports).
Haul to market	4	8	9.00	Scattering.
Do	5	7	10.28	Do.
Do	6	11	7.09	8 (5 reports).
Do	8	9	7.44	8 (3 reports).
Do	9	8	3.75	4 (5 reports).
Do	10	10	3.60	4 (4 reports).
Do	12	11	3.82	4 (4 reports).
Do	14	5	3.60	3 (2 reports). 4 (3 reports).

[1] Less than 1 mile.

CORN

Corn is usually planted with the same planter as cotton but the plates are changed. For the same width of row the rate of planting is practially the same for both crops. Corn is planted in rows which average wider than cotton, so that less time is required. A few reports show corn planted by hand, but this practice is uncommon. (See Table 19.) One of the following crops—cowpeas, velvet beans, and peanuts—is generally planted between the corn rows (fig. 9) at the time the corn is laid by. Cowpeas are planted in corn in rows or broadcast; velvet beans are planted in alternate rows, but most frequently with corn and peanuts; peanuts are always planted in rows.

After planting, the ground is sometimes harrowed. This work is all included under harrowing before or after planting (see Table 5), as the rate per day is the same. Practically the same cultivating-operations are performed on corn as on cotton. Siding and barring off are performed in the same way and for the same reason as on cotton. A few farmers cultivate middles by running one furrow, but the common practice is to run two furrows with a shovel cultivator. Very little hoe work is done on corn. Thinning out by hand or with a hoe and hoeing the weeds at the same time is the usual method followed. (See Table 20.)

Before the corn is harvested it is the custom to gather fodder for winter feed. It is seldom that all of the available fodder is pulled, as the practice is to take it where the yield is best. The leaves are pulled by hand from the stalks and tied by a leaf into small bundles weighing 1½ to 2 pounds and then hung on an ear of corn to dry. When cured, the bundles are gathered and stacked around poles or put in the barn. (See Table 21.)

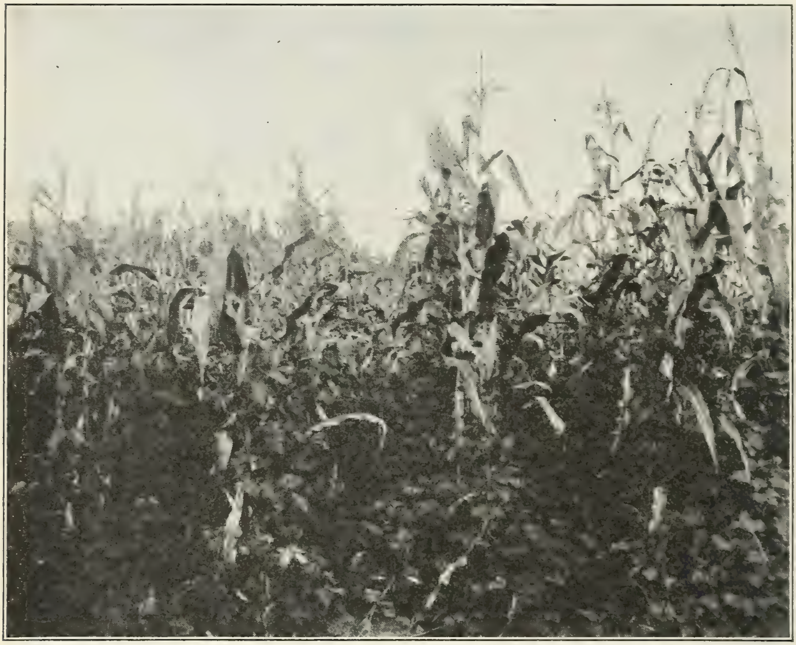

FIG. 9.—A good stand of corn with cowpeas broadcasted between the rows

Two methods of harvesting corn are practiced, both of which are equally common. Some pull the corn and throw in piles and then later on haul in; others pull and throw it into a wagon, which saves the labor of later loading it into the wagon. When corn is pulled, the shuck is not removed. At the time of feeding, the shuck may be removed or left, depending on the practice of each farmer. (See Table 22.)

Table 19.—*Planting corn*

(1-row planter, 1 man, 1 mule)

Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
4	24	7.58	8 (10 reports).
4½	50	7.94	8 (23 reports).
5	53	9.26	8 (14 reports). 10 (21 reports).
5½	10	9.60	Scattering.
6	56	11.11	10 (16 reports). 12 (18 reports).
6½	29	12.09	12 (7 reports). 14 (7 reports).
7	15	13.47	15 (5 reports).

Table 20.—*Cultivating corn*

Operation, implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Thin and hoe (1 man)	4½	10	2.25	1½ (4 reports).
Do	6½	11	3.18	2 (5 reports).
Side (scooter or scrape, 2 furrows, 1 man, 1 mule)	4	31	3.84	4 (19 reports).
Do	4½	58	4.45	4 (20 reports). 5 (15 reports).
Do	5	47	4.97	5 (23 reports).
Do	6	44	6.39	6 (17 reports).
Do	6½	24	6.55	6 (8 reports), 7 (6 reports).
Do	7	16	7.19	Scattering.
Bar-off (turnplow, 2 furrows, 1 man, 1 mule)	4½	12	4.54	4 (4 reports). 5 (3 reports).
Do	5	17	4.80	4 (4 reports). 5 (5 reports).
Cultivate middles (shovel cultivator, 1 furrow, 1 man, 1 mule).	4	18	7.94	8 (7 reports).
Do	4½	30	8.77	8 (15 reports).
Do	5	18	11.00	10 (5 reports(.
Do	6	16	12.06	10 (6 reports).
Cultivate middles (shovel cultivator, 2 furrows, 1 man, 1 mule).	4	11	4.72	4 (6 reports).
Do	4½	17	4.92	4 (6 reports).
Do	5	25	5.32	5 (8 reports).
Do	6	23	6.39	6 (7 reports).
Do	6½	10	6.60	6 (4 reports). 7 (4 reports).
Do	7	8	6.50	7 (3 reports).
Cultivate middles (shovel cultivator, 4 furrows, 1 man, 1 mule.	5	12	2.42	2½ (6 reports).

Table 21.—*Pulling fodder*

(1 man)

Bundles pulled per acre	Number of reports	Average acreage per day	Acreage reported most frequently
50 and less	13	4.31	Scattering.
51 to 75	17	1.91	2 (5 reports).
76 to 100	56	1.71	1 (15 reports). 1½ (10 reports).
101 to 125	17	1.62	Scattering.
126 to 150	29	1.54	1 (9 reports).
151 to 200	22	1.07	1 (10 reports).
201 and over	16	.97	1 (7 reports).

TABLE 22.—*Harvesting corn*

Operation	Yield per acre (bushels)	Crew		Number of reports	Average acreage per day	Acreage reported most frequently
		Men	Mules			
Pull and throw in piles	10 and less	1		10	4.28	5 (4 reports)
Do	11 to 20	1		39	3.38	Scattering.
Do	21 to 40	1		10	2.72	Do.
Do	41 and over	1		15	2.25	2¾ (4 reports).
Haul corn	11 to 20	2	2	20	7.24	Scattering.
Do	do	3	2	13	8.62	8 (5 reports).
Pull and haul	11 to 20	2	2	10	5.65	Scattering.
Do	do	3	2	20	6.18	Do.
Do	do	4	2	20	7.81	Do.
Do	21 to 40	4	2	12	4.81	Do.
Do	11 to 20	5	2	9	8.92	Do.
Do	do	6	2	8	9.97	Do.

PEANUTS

Peanuts are planted in various ways—as a first crop interplanted between the rows of corn—or as a second crop following small grain. When grown alone, they are planted in rows about 3 feet apart, and when interplanted with corn the rows are the same width as the corn. (See Table 19.) Peanuts are usually dropped by hand. When a planter is used, the peanuts must be shelled. The time saved by using a planter should offset the time required to shell seed. When peanuts are dropped by hand it is necessary to cover the seed. This labor is also saved by using a planter. (See Table 23). Siding, hoeing, and cultivating middles are the common cultivating operations on peanuts. Weeders are used by a few men for cultivating middles. (See Table 24).

Various methods are used to harvest peanuts. With the exception of what is saved for seed, most of the farmers interviewed turn their hogs into the field to harvest the crop. On sandy soils, the vines are sometimes pulled by hand and then stacked around a pole in the field and later enough peanuts are picked for seed. A plow is sometimes run along the row to loosen the plants, after which they are pulled and stacked. Where the soil is light and sandy, the peanuts are sometimes scratched out with the fingers. This is done only when a few peanuts are wanted, or to dig out those lost when the vines are pulled. (See Table 25). When the crop is stacked and after it has cured, the vines are threshed or fed. When the crop is threshed the vines are frequently baled for hay.

TABLE 23.—*Planting peanuts*

Method, implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Plant, solid crop, by hand in rows (1 man)	3	31	2.56	2½ (10 reports).
Do	3½	15	3.13	Scattering.
Cover, solid crop, turnplow, (1 furrow, 1 man, 1 mule)	3	24	5.73	6 (9 reports).
Do	3½	15	6.25	6 (6 reports).
Plant, in corn, by hand in rows, (1 man)	6	13	6.33	Scattering.
Do	6½	14	6.84	Scattering.
Do	7	13	7.38	7 (8 reports).
Cover, in corn, turnplow, (1 furrow, 1 man, 1 mule)	6½	11	12.00	Scattering.
Do	7	13	12.92	14 (4 reports).
Plant, solid crop, 1-row planter, (1 man, 1 mule)	3	20	6.40	6 (12 reports).
Plant, in corn, 1-row planter, (1 man, 1 mule)	6	15	11.33	10 (6 reports). 12 (7 reports).
Do	6½	15	11.37	10 (5 reports). 12 (4 reports).
Do	7	13	11.92	12 (6 reports).

TABLE 24.—*Cultivating peanuts*

Operation, implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Hoe (1 man)	3	16	1.50	1 (6 reports).
Do.	3½	16	1.61	1 (8 reports). 2 (4 reports).
Do.	6	14	1.98	2 (7 reports).
Do.	6½	25	2.12	2 (9 reports).
Do.	7	22	2.45	2 (13 reports).
Side (scooter or scrape, 2 furrows, 1 man, 1 mule)	2½	9	2.39	2 (4 reports).
Do.	3	44	3.40	3 (15 reports).
Do.	3½	22	3.52	3 (10 reports). 3½ (8 reports).
Do.	6	22	5.66	5 (7 reports). 6 (7 reports).
Do.	6½	25	6.44	6 (8 reports).
Do.	7	25	6.84	7 (5 reports). 8 (6 reports).
Bar-off (turnplow, 2 furrows, 1 man, 1 mule)	6½	11	6.18	6 (5 reports).
Cultivate middles (shovel cultivator, 1 furrow, 1 man, 1 mule).	3	32	6.17	6 (7 reports). 8 (10 reports).
Do.	3½	9	7.22	7 (5 reports).
Weed (1 furrow, 1 man, 1 mule)	3	11	13.55	10 (4 reports). 15 (3 reports).

TABLE 25.—*Harvesting peanuts*

(1 man)

Method	Number of reports	Average bushels per day	Bushels reported most frequently
Scratch	10	1.60	1½ (5 reports).
Pick	72	1.62	1½ (30 reports). 2 (31 reports).

SWEET POTATOES

Sweet potatoes are bedded in an open bed or coldframe early in March to obtain slips for planting. Three or four bushels of seed are ordinarily required to produce enough slips to plant an acre. Fourteen men each reported bedding enough sweet potatoes in a day to plant an average of 8½ acres. When the slips are planted, three operations are necessary; pulling, dropping in rows, and setting the slips. Table 26 shows the achievements of one man at the combined planting operations.

The operations of cultivating sweet potatoes are about the same as for the previous crops. The total time is greater because of the manner in which the crop grows. (Fig. 10.) During the cultivating season after the vines start to run it is necessary to keep them all on one side of the row. To do this, they are turned by hand with a stick just ahead of the cultivator. After one side of the row is worked, the vines are again turned so that the other side may be worked. This operation is repeated as often as siding is done. Table 27 shows the different operations for cultivating and Table 28 the performance of one man when turning the vines.

Such a variety of harvesting methods were used that not enough reports were obtained on any one way, nor for a given width of row, to show the crew performance for the individual harvesting operations on sweet potatoes. The first harvesting operation is cutting vines, which is done with a scooter, disk harrow, hoe, or scythe, depending on the size of the field, after which they are dragged off with a hayrake or scooter, to clear the land preparatory to plowing up the crop with a turnplow run from one to four furrows to the row. The next operation is to pick up and pile and then haul to the place of storage. The last two operations are sometimes done at the same time.

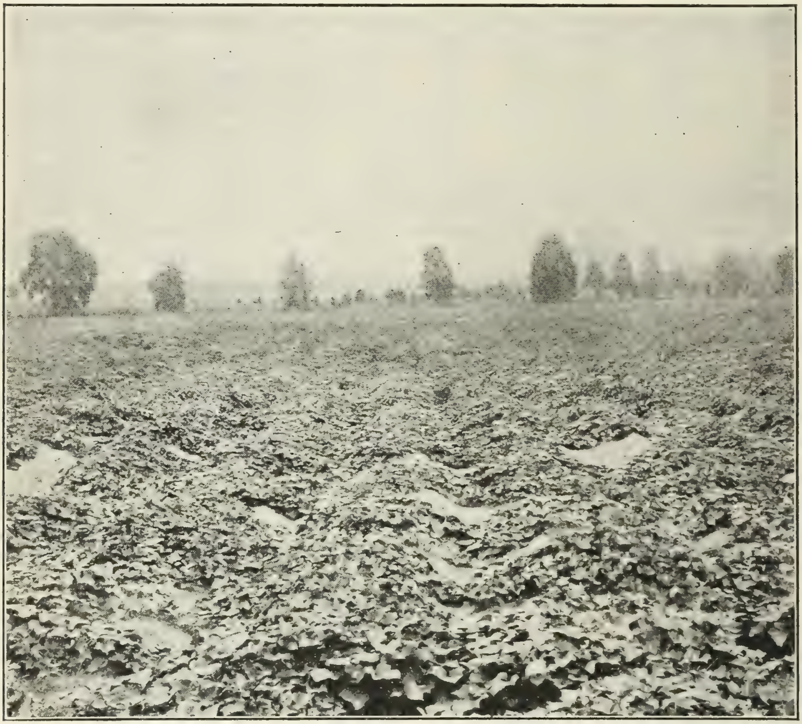

FIG. 10.—Sweet potato vines allowed free run after the last cultivation

TABLE 26.—*Planting sweet potatoes*

(Drop and set—1 man)

Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
3	15	0.58	½ (14 reports).
3½	32	.60	½ (4 reports). ¾ (5 reports).
4	12	.71	¾ (4 reports). 1 (4 reports).

TABLE 27.—*Cultivating sweet potatoes*

Method, implement, and crew	Width of row	Number of furrows	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet				
Hoe (1 man)	3½		29	1.31	1 (16 reports).
Do	4		11	1.59	1 (7 reports).
Side (scooter or scrape, 1 man, 1 mule)	3	2	9	3.33	3 (5 reports).
Do	3½	2	31	3.61	3 (11 reports). 4 (10 reports).
Do	4	2	11	4.00	4 (4 reports).
Cultivate middles (shovel cultivator, 1 man, 1 mule.)	3½	1	19	6.89	6 (8 reports). 8 (6 reports).
Do	4	1	11	7.82	8 (6 reports).
Do	3½	2	12	3.42	3 (6 reports).

TABLE 28.—*Turning sweet-potato vines*

(1 man)

Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
3	9	1.44	1 (4 reports).
3½	29	1.98	1½ (7 reports). 2 (7 reports).

SUGARCANE

Sugarcane in all of the Southern States, with the exception of the sugar area of Louisiana and a small area in Florida, is grown for sirup. As the cane is grown in small patches, the different operations performed in growing the crop are few in number compared with those practiced when it is grown for sugar. The operations and requirements as given here are not to be considered as indicative of the work necessary to produce cane for sugar.

As the number of reports on this crop is rather small it is not possible to give details for all operations. For planting, canes from the previous year's crop are used. The first operation in planting is to take out these canes from the bed in which they have been kept over winter. The canes are shucked by removing the old leaves and are then thrown in piles. From the piles they are hauled to the field. The canes are usually 3 or 4 feet in length and are cut into three sections with a cane knife before being dropped into the row. (Fig. 11.) Cane is also grown from the stubble of the plant cane from the preceding year; thus two crops are harvested from the same land from one planting. As this practice saves bedding cane for all of the following year's crop, as well as planting, it is an advantageous saving of labor and expense of seed cane each year. A crop of cane grown in this manner is designated as stubble cane or ratoon.

Table 29 shows the rate of planting when done by one man and two mules. This operation shows perhaps better than any other the wide difference between methods used in growing cane on the small farm and that grown on the cane plantation. The operator on the former does all the work, whereas on the latter the planting crew may number as high as 70 men, women, and children.

After the canes are dropped in the row, it is necessary to cover them. This work is done by using a 1-mule turnplow and throwing two furrows, one from each side of the row, over the cane. For the operation, 11 men each reported an average of 4.18 acres per day for a 4-foot row. Rolling or packing, after covering, to press the earth firmly around the stalks is sometimes practiced, but it is not common on small patches. The usual methods of cultivating as practiced on sugarcane are given in Table 30.

A number of ways of harvesting the crop are practiced, but cutting and stripping is the most common in this area. When harvested, the cane is cut by hand and the leaves are stripped. The canes are then dropped on the ground or thrown in piles. From the piles the stalks are hauled to the sirup mill. Topping may also be done and takes little extra time. Harvesting is a slow operation, as the cane makes a heavy growth and cutting and stripping take considerable time. Irrespective of width of row, 20 men each reported harvesting an average of 0.1 acre per day.

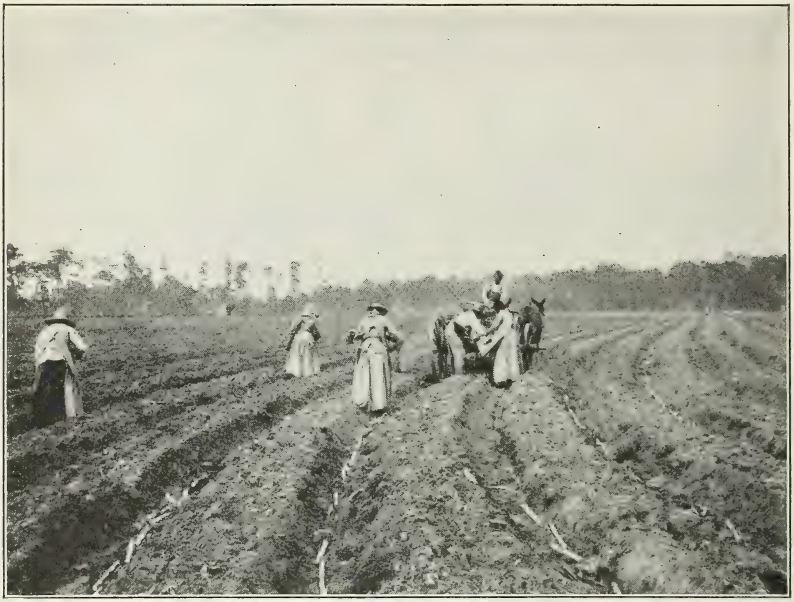

FIG. 11.—Stalks of cane are hauled to the field and cut into planting lengths on the wagon and dropped into the rows. They are then covered by throwing a furrow from each side of the row with a turnplow

At the time of harvesting, the seed canes for next year's crop are saved. They are cut and topped but not stripped, and are covered or bedded for protection during the winter months. Thirteen men each reported bedding an average of 1,258 seed canes per day.

TABLE 29.—*Planting sugarcane*

(1 man and 2 mules)

Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
Feet			
4	14	1.04	1 (8 reports).
5	12	1.23	½ (3 reports). 1 (3 reports).

TABLE 30.—*Cultivating sugarcane*

Operation, implement, number of furrows, and crew	Width of row	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet			
Hoe (1 man)	4	14	.91	1 (7 reports).
Do	5	12	1.03	1 (9 reports).
Side (scooter or scrape, 2 furrows, 1 man, 1 mule)	4	14	4.07	4 (8 reports).
Cultivate middles (shovel cultivator, 2 furrows, 1 man, 1 mule)	4	14	4,12	4 (9 reports).
Do	5	12	4.39	4 (3 reports). 5 (3 reports).

COWPEAS

Cowpeas are grown alone as a first crop, following oats as a second crop, and in corn between the rows. When planted in corn the peas are sown in rows either by hand or with a planter, or broadcasted by hand; and, when alone, they are usually sown broadcast by hand or with a drill. When cowpeas are grown alone, it is a common practice to broadcast them by hand before plowing. After broadcasting the peas, the land is given a light plowing and the seed is covered by this operation. (See Table 31.)

The only cultivation given cowpeas is when they are planted in rows. As only a small number of men plant cowpeas this way, no table is presented showing the crew performance for this operation. It is always the custom to pick peas for seed and for family use. The peas are not picked clean, but only those parts of the field are gone over where the yield is best. There were 47 men each of whom reported picking an average of 174 pounds of cowpeas per day. Of this number, 24 reported picking 200 pounds. The rate of picking is based on the weight of peas in the pod.

The tables covering operations for making cowpea hay are given under hay. Where a large acreage of cowpeas is planted, they are frequently cut with a mower and later threshed and the seed sold. When peas are picked by hand, they are frequently threshed out with a flail or hand huller. Table 32 shows the rate of threshing for different-sized crews.

TABLE 31.—*Planting cowpeas*

Method and implement	Width of row	Crew		Number of reports	Average acreage per day	Acreage reported most frequently
		Man	Mules			
Plant by hand in rows (in corn).	5 feet	1		12	8.50	8 (4 reports).
By hand (alone or in corn)	Broadcast	1		64	14.33	10 (18 reports). 20 (12 reports).
Cover (alone) turnplow	do	1	1	29	2.16	2 (8 reports).
Do	do	1	2	13	2.75	2 (7 reports).
Plant, 1-row planter (in corn)	5 feet	1	1	11	9.91	10 (6 reports).
Do	6 feet	1	1	19	12.32	12 (9 reports) 15 (6 reports).
Plant (alone) drill	Broadcast	1	2	22	8.23	8 (6 reports).
Do	do	1	3	14	8.71	10 (5 reports).

TABLE 32.—*Threshing cowpeas*

(Threshing machine)

Men in crew	Number of reports	Average bushels per day	Bushels reported most frequently
3	16	96.25	100 (4 reports).
4	9	117.77	Scattering.

OATS, WHEAT, AND RYE

All operation and labor performances for small grain are here presented together. These crops are handled in the same way and the rate of work for different operations, except threshing, is the same. The oat crop is planted either for grain or for hay. Wheat and rye are practically always cut for grain. These crops are usually planted in the fall and harvested early the following season. Often a second crop follows on the same ground; as, for example, peanuts.

Planting is done both by hand and by drill, the latter being the more common method. As with cowpeas, everyone does not plow before sowing. Those who do not, run a turnplow at a shallow depth to cover the seed after sowing. (See Table 33.)

Practically all of the small grain crop is cut with a binder, but a few farmers use a cradle. Cradles are used only where the acreage is small and the field irregular. Every man who uses a binder does not necessarily own a machine, but may hire the work done by a neighbor. After the grain is cut it is shocked in the field. (See Table 34.)

Following harvest, the grain is stacked and hauled to the barn or threshed from the shock. Table 35 shows the rate of work for different yields of grain per acre when hauling bundles to the barn. Some farmers do not thresh their oats, but feed them from the bundle. The performance of different crews when threshing oats from the stack or barn is given in Table 36. Not enough reports are available for wheat or rye.

TABLE 33.—*Planting oats, wheat, or rye*

Method and implement	Number of reports	Crew		Average acreage per day	Acreage reported most frequently
		Men	Mules		
Plant broadcast (by hand)	84	1		14.85	10 (22 reports). 20 (18 reports).
Cover, turnplow	13	1	1	1.62	1½ (4 reports).
Do	15	1	2	2.27	2 (11 reports).
Plant, drill	59	1	2	8.89	8 (25 reports). 10 (18 reports).
Do	31	1	3	9.40	10 (14 reports).
Do	15	1	4	10.87	10 (5 reports). 12 (4 reports).

TABLE 34.—*Cutting and shocking oats, wheat, or rye*

Operation and method	Number of reports	Crew		Average acreage per day	Acreage reported most frequently
		Men	Mules		
Cutting, binder	114	1	3	9.80	10 (46 reports).
Do	11	1	4	12.09	Scattering.
Do	28	2	4	11.61	10 (13 reports). 12 (9 reports).
Cutting, cradle	12	1	-------	3.29	Scattering.
Shocking	160	1	-------	10.18	8 (35 reports). 10 (60 reports). 12 (35 reports).

TABLE 35.—*Hauling bundles from field to barn*

(Oats, wheat, or rye)

Yield per acre (bushels)	Crew		Number of reports	Average acreage per day	Acreage reported most frequently
	Men	Mules			
10 and less	2	2	16	14.84	Scattering.
11 to 20	2	2	32	12.20	Do.
21 and over	2	2	36	6.83	5 (9 reports)
Do	3	2	10	9.80	Scattering.

TABLE 36.—*Threshing oats*

(From stack or barn)

Men in crew	Number of reports	Average bushels per day	Bushels reported most frequently
4	12	452	400 (3 reports).
5	14	587	Scattering.
6	10	670	Scattering.

WATERMELONS

The watermelon crop is important on many farms with sandy soils in southern Georgia. The general practice is to plant the seed by hand in rows 10 feet apart and the same distance in the row, and cover it at the same time with the foot or a hoe. Sometimes the seed is planted in rows 8 by 10 and 10 by 12 feet. As the seed is planted by hand, it is necessary to mark the rows and then check them after bedding, so that the distance between hills will be uniform. The rate of performing these operations is given in Table 6, page 11. Each of 53 men planted watermelon seed in rows 10 by 10 feet, at an average rate of 9.27 acres per day. Eighteen of these men each reported planting an average of 10 acres per day.

The ordinary cultivating operations performed on watermelons are siding, thinning, hoeing, and cultivating middles. Table 37 shows the rate of work for these operations. After the last cultivation, cowpeas are sometimes planted between the rows and later cut for hay.

The crop is usually fertilized, either before or after planting. (See Table 12).

Different methods of harvesting melons are in use, but the most common is to cut and pile the melons. There were 12 men each of whom reported cutting and piling an average of 1.42 acres of melons per day with a yield of 400 to 500 melons per acre. After the melons have been harvested, they are hauled to town and packed in the car for shipment.

TABLE 37.—*Cultivating watermelons*

Operation and crew	Width of row	Number of furrows	Number of reports	Average acreage per day	Acreage reported most frequently
	Feet				
Hoe and thin (1 man)	10		24	5.04	5 (7 reports).
Hoe	10		14	6.21	6 (5 reports).
Side (scooter or scrape, 1 man, 1 mule)	10	2	34	9.09	10 (10 reports).
Cultivate middles (shovel cultivator, 1 man, 1 mule)	10	2	19	8.53	8 (6 reports) 10 (7 reports).
Do	10	6	12	3.29	3 (5 reports).

HAY

Hay is commonly made from cowpeas, oats, or peanuts, although sorghum and native grasses are sometimes used. Cowpea hay constitutes the bulk of the crop. No standards of labor are given for growing hay, as these may best be obtained from the particular crop which it is desired to grow for hay. The operations on cowpeas, oats, and peanuts up to and including planting are the same irrespective of the disposal of the crop. The several operations necessary for putting up hay are given in Table 38. When a farmer intends to sell hay, it is usually baled before being sold. The rate of work on this operation with different-sized crews is given in Table 39.

TABLE 38.—*Putting up cowpea, oats, or peanut hay*

Operation and implement	Crew		Number of reports	Average acreage per day	Acreage reported most frequently
	Men	Mules			
Mowing	1	2	135	7.36	8 (52 reports).
Raking, dump rake 8′ by 12′	1	1	80	13.05	12 (14 reports). 16 (20 reports).
Do	1	2	54	13.17	12 (10 reports). 16 (11 reports).
Bunching (cowpeas and peanuts) around poles	1		38	6.12	4 (7 reports). 10 (8 reports).
Do	2		13	7.08	6 (3 reports). 8 (3 reports).
Do	3		11	7.91	8 (4 reports)
Stacking in field	2	2	18	5.39	Scattering.
Do	3	2	17	7.88	10 (5 reports).
Hauling from field	1	2	18	8.14	Scattering.
Do	2	2	55	9.25	Do.

TABLE 39.—*Baling cowpea, oats, or peanut hay*

Crew		Number of reports	Average tons per day	Tons reported most frequently
Men	Mules			
2	1	11	4.41	Scattering.
3	1	39	4.68	1 (7 reports). 6 (6 reports).
4	1	17	4.85	5 (4 reports).
4	2	11	6.59	Scattering.

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